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Hamfest 2022 -- Great Weather, Great Event!

EGARA's annual Hamfest enjoyed a beautiful August day and a crowd of hams from throughout the Capital District and beyond. Adding to the event were dozens of giveaways, ranging from HT radios to gift certificates and shack accessories -- and finally, a Grand Prize of \$500 won by Ken Fuchs, KC2VUG of Cairo.

As it did last year, the club held its 2022 Hamfest at the beautiful East Greenbush Town Park, providing plenty of space for parking and tailgating, as well as the air-conditioned Red Barn building. Things kicked off Friday morning with club President Bryan Jackson, W2RBJ, and Treasurer Don Mayotte, KB2CDX, picking up food, beverages and other needed items. At 4 pm, several club members arrived at the Masonic Lodge to retrieve Hamfest supplies from storage and transport them to the park. By 7 pm, Hamfest most of the setup was complete, making final preparations much easier early Saturday morning.

Also lending support were club members Jim Pendolino, KC2HRO. and his daughter Gina, KC2QJC, who used their affiliation with Rensselaer County Search and Rescue to provide tables for Hamfest vendors. In addition, club member Joe Ostering, N2CJF, donated custom printed Hamfest staff shirts through his business, Riverview Stitch and Print.



Club Treasurer Don Mayotte, KB2CDX, congratulates Grand Prize winner Ken Fuchs, KC2VUG

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EGARA Making Plans to Attend East Greenbush Community Day

East Greenbush will hold its first Community Day on September 17th from 11 am to 3 pm and Egara is making plans to attend and operate an Amateur Radio station so residents can learn more about the hobby and the club.



"This is a great opportunity to get the club exposure and to support our local community," said Egara President Bryan Jackson, W2RBJ. "We'll also have the opportunity to showcase Amateur Radio and hopefully get some local residents interested in joining our club -- especially younger folks."

Club members will be asked to sign-up to help with the event during the next monthly meeting on September 14th when additional details are expected to be available.

Next Membership Meeting - September 14, 2022 - Masonic Lodge at 7 pm

Hamfest 2022 -- Another Great Event...

Hamfest itself began with tailgaters starting to roll in around 6 am Saturday -- and it wasn't long after that they were looking for hot coffee and EGARA's famous sausage, egg and cheese breakfast sandwiches. As usual, food served during the event got rave reviews thanks to the kitchen crew of Dave Smith, WA2WAP, Carl Greenman, KC2UTC, Russ Greenman, WB2LXC and Dave Williams, N2VLQ. Dave Smith also donated the sausage patties for the breakfast sandwiches, as well as chili and onions for those who wanted their hot dogs and burgers to have a little extra kick.

Once again, KJI Electronics was on hand as a premier sponsor -- not only helping draw attendance but also offering great Hamfest pricing on Yaesu radios, Diamond and Comet antennas, MFJ accessories and a nice selection of other ham gear and publications. KJI also donated a brand new Yaesu FT-4X HT radio as one of the many prizes given away by the club.



John Fisher, W2JSE, of Troy is congratulated on his win of a Yaesu FT-4X by Gene Niemiec, owner of KJI Electronics, which donated the radio as a prize



Frank Gitto, KA5VVI, holds the dual band HT radio donated by premier sponsor Radioditty as EGARA Board member Steve VanSickle, WB2HPR, looks on.

Other top prizes included a dual band HT radio donated by premier sponsor Radioditty, won by Frank Gitto, KA5VVI, of Glens Falls.

Meanwhile, a Pro Set Elite headset donated by premier sponsor Heil Sound, was won by Peter Harvey, W2FW of Troy, and a \$150 gift certificate donated by Custom Antenna, was won by Steven Novak, KA2EXB of Guilderland. Dana Jonas, WA2WNI, scored a \$50 gift certificate provided by Hamfest sponsor ARRL.

Raffles also put smiles on the faces of those whose tickets were pulled as winners. Club member Bill Hickey, KD2WQN, won \$100 in the 50/50 raffle and Harry Barney, K1NLY, of Manchester Center, Connecticut, was the winner of one of two tri-band HT radios donated by premier sponsor B-TECH.

Tailgaters also turned out in force with lots of great bargains -- and many hams said they were able to find exactly what they were looking

for at prices they couldn't turn down. There were also lots of free giveaways, with tote bags donated by Heil Sound, "fidget spinners" provided by Wouxun, and T-Shirts from Main Trading Company (MTC). Catalogs sent by DX Engineering -- which donated a \$50 gift certificate -- also went quickly.

This year's Hamfest also featured a much improved public address system which was graciously donated to the club this year by Al Plouff, KB2MVP. The new setup provided clear sound both inside and outside the Red Barn building, allowing those in attendance to easily hear sponsor announcements and raffle ticket winners.



KJI Electronics offered a wide range of ham gear at special event pricing

EGARA also offered a \$10 Hamfest Special for those looking to join the club and two new members took advantage of the offer. They included Dave Haughton, KD2WAD, of Castleton and Ed Munn of Menands. Ed is a former ham who's looking to get back on the air and said he looked forward to meeting other club members to help him get back on the air after a hiatus of several years.

Holding Hamfest once again at the East Greenbush Town Park also drew lots of compliments, both on the facilities and the location, which offers a wooded setting next to a small lake, as well as ample parking and tailgating space. EGARA has already reserved the park for next year and will hold its annual Hamfest on June 3, 2023... so save the date!

Hamfest 2022 in Pictures



Save the Date!
Hamfest 2023
June 3, 2023

Field Day Wrap - W2EGB

Field Day 2022 was back at the Masonic Lodge for the first time since the Covid pandemic forced club members to operate from their home stations two years ago. Overall, 25 members participated in the event which ran for 24 hours over June 25-26. This year also saw the club running "Class 3A", with a trio of stations on the air. In addition to the club's two regular HF stations, Dave Smith, WA2WAP, ran a third station to make digital contacts.

Unfortunately, the batteries normally used to power the club's stations -- which provides extra points -- were not up to the task after several years of use, resulting in the inability to still hold a charge due to their age. Still, EGARA was able to amass 1,666 points, with 650 of those attributed to bonus points, as shown below.

EGARA Total Score: 1,666

Bonus Points

• Public location	100
• Public information table	100
• Site visit by invited served agency	100
• Educational activity	100
• Safety officer	100
• Social media	100
• Entry submitted via web	50
Total bonus points	650



Score Summary

	CW	Digital	Phone	Total
Total QSOs	74	15	330	
Total Points	148	30	330	508

Claimed Score = (QSO points 2x 100 watt output power multiplier) = 1,016

Band/Mode QSO Breakdown

	CW	Digital	Phone
80m			64
40m			171
20m	64	15	78
15m	10		17
TOTAL	74	15	330



On the Beam

News & Notes

ARRL Annual Report Now Available for Download

ARRL The National Association for Amateur Radio® has published its 2021 Annual Report. The report summarizes ARRL's program and fiscal activity for the year.



In his introductory remarks, ARRL President Rick Roderick, K5UR, said that the organization moved steadily forward in 2021, gaining momentum after the challenges that 2020 brought. "It began bit by bit in the early months of the year with Headquarters staff returning to the office, and reached a turning point on July 15, the day we rededicated ARRL Headquarters and reopened the building and W1AW to our members," Roderick said. He also noted that the re-dedication ceremony "gave all of us an opportunity to reflect on where ARRL has been, and affirm where we are headed," and expressed excitement for what's coming next.

The theme of the 2021 report -- "Back Together" -- referred to the many unions and reunions that occurred throughout the year, from being able to attend in-person hamfests once again, to partnering with Netherlands-based HF Kits to produce the antenna kit, as well as teaming up with the Radio Society of Great Britain at the end of the year to commemorate the centenary of the ARRL sponsored Transatlantic Tests.

Included in the report is ARRL's Report to America, which highlights recent instances of ham radio operators serving their communities by providing emergency communications. These stories include amateur radio activations and response for storms, fire, and other disasters -- When All Else Fails®.

The 56-page Annual Report also recounts and summarizes the activities of all of ARRL's departments, and includes a complete 2021 fiscal report. ARRL ended 2021 with 158,238 members, a total that was slightly under the year-end goal of 160,084, but gained 29,027 new members, which represented an 11% increase from 2020.

The ARRL 2021 Annual Report is available for download at www.arrl.org/annual-reports.

Masonic Lodges on the Air Event to Take Place on September 24

Masonic Lodges on the Air (MLotA), an Amateur Radio special event, will be on the air Saturday, September 24, 2022, from locations across the county. The event is open to all amateur radio operators, and the idea for the event grew out of the realization that many Freemasons also have a love for amateur radio. EGARA is exploring working with the East Greenbush Lodge to participate in the event and is seeking a member to coordinate plans.



The event was first hosted last year by two Ohio Masonic Lodges. Because of its success, the event has now been scheduled for the next three years.

The event will be operating K8BXQ from 10:00 AM - 6:00 PM ET, using SSB only on 80, 40, 20, 15, and 10 meters. All contacts must be in the phone portion of the bands. Stations may be contacted once on each band.

Full contest rules and information can be found at www.cqmorelight.com/rules.

Bob Holstrom, KD2BKD, said that masons in New York and New Jersey will be setting up stations at the historic museum grounds of The DeWint House, George Washington's Headquarters in Tappan, New York. The property is owned and operated by the Grand Lodge of Free and Accepted Masons of the State of New York.

The special event call sign for that location will be W2QX, operating from 9:00 AM - 7:00 PM ET.

EGARA August Meeting Minutes

The monthly club meeting was held on August 10th and was called to order at 7:00. There were 15 members in attendance

- President Bryan Jackson, W2RBJ welcomed everyone and members introduced themselves;
- Raffle was offered and a number of prizes were won. Thank you to everyone who bought tickets;
- Lawn maintenance at the Lodge has not been needed much this summer due to the lack of rain;
- Members were reminded to send their items for sale, purchase or trade so they can be included in the club newsletter Sidebands, and on the club's website. Items should be submitted to Bryan Jackson at W2RBJ@Outlook.com;
- Hamfest was discussed and plans were reviewed. Members were asked to attend setup at 4 pm Friday, August 26th and at 5:30 am on Saturday, August 27th. Dave Smith, WA2WAP, offered to donate the breakfast sausages and prepare.
- Gifts for working FIELD DAY will be mug or tote. Field Day participants were advised to let Steve VanSickle, WB2HPR, know their preference so they can be ordered;
- Following the meeting, inventory was taken of Hamfest supplies and items needed for the event were staged in the lodge basement in preparation for transportation;
- Pizza and beverages were offered
- The meeting was adjourned at 7:40 PM.
- Submitted by Dave Smith, WA2WAP - Secretary

Welcome to Our New Members!

Dave Haughton, KD2WAD, of Castleton

Ed Munn of Menands.

The History of Ham Radio: Six Segments, Sans Spark

Chris Codella, W2PA, author, John Pelham, W1JA, editor, Phil Johnson, W2SQ, editor

(Editor's note: By special arrangement with the authors, Sidebands is pleased to present this multi-part series on the history of ham radio. Subsequent chapters will be published in future monthly editions of the newsletter)

For nearly a year, hams had been operating in their first assigned band of wavelengths, 150 to 200 meters. They had also been experimenting below 150 meters by special government permission, dramatically demonstrating the effectiveness of the shortwaves with the first transatlantic two-way contacts, and marking the birth of international amateur radio. But why, they wondered, had the government designated the spectrum below 150 meters as “reserved?” Clearly that was a temporary state of affairs. What would come next for the shortwaves, which hams had proved were not as useless as the radio establishment had thought?

The spring of 1924 brought a new radio bill to the House of Representatives Committee on Merchant Marine and Fisheries, the legislative body still responsible for radio regulation and policy. Congressman Wallace H. White of Maine was again at the helm as sponsor and committee chairman. This time it was not simply another modification of the aging and obsolete 1912 law but an entirely new one designed to replace it. Still, the new bill was similar to the previous one carrying White's name, in that it would eliminate technical details from the law itself and give the secretary of commerce authority over every aspect of radio law, including defining the classes of operation. Recognizing the rapid recent changes occurring in the radio art, the bill was intended to create a legal “administrative skeleton” that could survive unanticipated technologies yet to come, something the 1912 law could never have done—its major flaw. While amateurs had received firm support from the secretary in the past, nothing in the current law would prevent future appointees from changing all that. Of greatest concern to amateurs: there was no explicit mention of the amateur service in the bill, or of any other radio service for that matter. At the same time, given the accelerating advancement of technology, expecting a new law to contain all the technical details pertaining to every service was impractical, if not impossible. It would be much too complex and would quickly become outdated. Therefore the League was taking a qualified, if resigned, stance on the proposed law.

Hams would have to take their chances to a degree, but some crucial modifications would have to be made before the League could endorse it. Of greatest concern was the “discretionary power” the proposed law would grant to the secretary of commerce. Regulatory decisions made under such a law could not be reviewed or challenged in the courts, and therefore would make the secretary the “absolute dictator and czar of radio,” as ARRL secretary Kenneth Warner described it.

Amateurs were not alone in calling for a change during the congressional committee's hearings—the other radio interests shared the same concern. One suggested remedy was simply to remove the language that referred to the secretary's discretion—expressions such as “as he may deem necessary.” Another suggestion, foreshadowing what eventually happened, was to place the authority in the hands of a “Radio Commission” rather than a single person. RCA and AT&T favored the bill as it was, but Westinghouse, along with most independent broadcasters, opposed it.

One month later, an amended Senate bill emerged to be considered by Congress in its fall session. The new wording limited the discretionary powers of the secretary, provided for challenges to rulings, and—most importantly—explicitly named amateur radio in several places. The League's concerns had been largely satisfied.

Elsewhere in the Senate, the Committee on Finance, perhaps wanting to be involved in the radio boom too, was considering a ten-percent tax on all radio equipment and parts, that would affect all services including amateur radio. But it was proposed based on the misconception that a single manufacturer, RCA, was setting prices as a monopoly. After receiving protests from around the country and being schooled on the characteristics of the market, the proposal was thrown out.

The call for access to the shorter waves was soon answered. On 25 July 1924, the Bureau of Navigation, Department of Commerce, announced that amateurs would be granted access to five new bands of wavelengths at 75 to 80, 40 to 48, 20 to 22, and 4 to 5 meters, added to the already existing band at 150 to 200 meters. In trade, all access to wavelengths above 200 meters was sacrificed to help enable broadcast expansion.

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History of Amateur Radio...

Although the League had hoped for access to the band from 105 to 110 meters (where the landmark recent transatlantic QSOs had taken place), only special license holders could apply to use it for now, and only for experiments with various classes of government and commercial stations, particularly the Naval Research Laboratory and the arctic expeditions. General access to the band would be revisited at the National Radio Conference to be held in Washington in September.

Besides notifying the press, Commissioner D. B. Carson sent a letter to the ARRL for distribution. Carson relied on QST to get the word out, stating that it was not possible to notify each individual amateur because of “the work involved.” Printed copies of the six paragraphs of new regulations were sent directly only to the government’s radio supervisors.

CW alone would be allowed on the new bands—no spark or phone. This included all forms of what was referred to as tube telegraphy, including vacuum tube circuits with battery, generator, partly rectified, unfiltered, and even AC power applied to the plate (anode) electrodes. This rather relaxed regulation resulted from considering interference to broadcast stations. Most believed that key thumping, the transient production of harmonics by sharp on-off keying of a CW transmitter (later called key clicks) was the primary source of such interference. So even though using a pure DC supply resulted in a cleaner signal, special design was still required to eliminate thumping. The regulation also required that an antenna could not be directly coupled to a transmitter. Aside from increased efficiency, this would further limit interference from harmonics and power supply modulation. In the 150 to 200 meter band the restrictions on transmission modes were relaxed to permit all types of amateur transmissions, including spark.

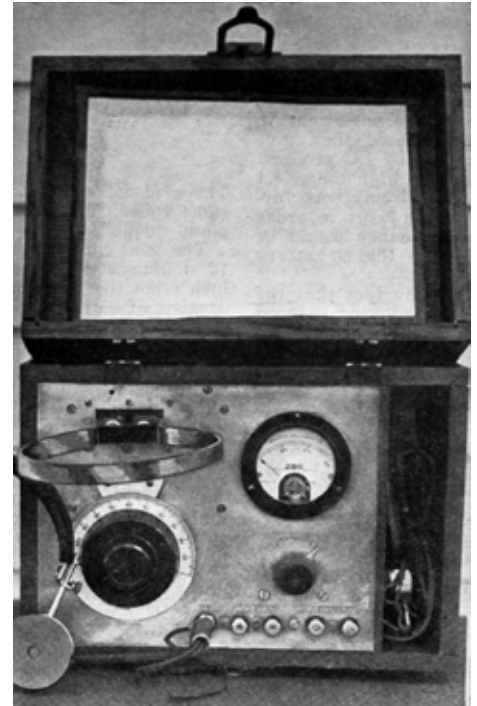
In what Warner called the “crème-de-la-crème” of the new regulations, no quiet hours would be required on the new bands because of what was assumed to be a much smaller chance of interference to broadcast listeners. Amateurs could once again transmit during the evening prime time.

Before amateurs could operate in the new bands, they had to return their licenses so that new ones permitting it could be issued. Access to some or all of the new allocations could be granted for each applicant on an individual basis. And all of this would be subject to change at the September conference. Amateurs were urged to get active on the new bands as soon as possible to build a case for continued access.

One month after the Commerce Department’s announcement, Canada granted the same bands to their amateurs but with two significant differences: They must use only pure CW, and loose coupled transmitters would not be required. They were tight on clean signals while being lax on harmonics.

To prepare amateurs to occupy the new bands, QST Technical Editor Robert S. Kruse wrote about techniques and circuits to get them there. He began by loudly assuring everyone that “THERE IS NOTHING STRANGE ABOUT THE 20 to 100 METER REGION.” Wavelengths below 20 meters, however, required “special stunts” due to tube characteristics and so operation on the 4 to 5 meter band would be treated in a separate article. In any event, the first thing to do was to get a shortwave wavemeter. “It is absolute nonsense to start sending and receiving at 40 meters unless one knows where 40 meters is. Don’t do it. Just for once break all amateur traditions and make a wavemeter FIRST,” he pleaded.

Recognizing a widespread lack of ability to measure wavelength, Kruse, also a Bureau of Standards engineer, had recently written a two-part article about wavemeters. They were already available commercially from General Radio and the Jewell Electrical Instrument Company, and were also not very difficult to build. A homemade wavemeter simply consisted of a calibrated tuned circuit and an indicator such as a crystal detector and headphones, light bulb, or galvanometer. One must choose a variable capacitor and inductor that would result in enough space on an adjustment dial to sufficiently resolve individual signals.



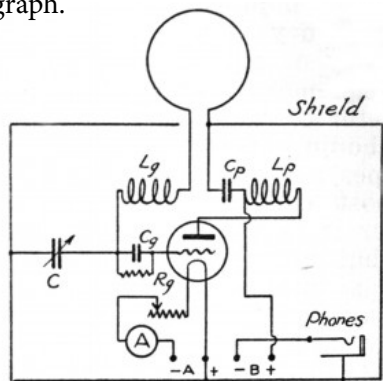
Homebrew wavemeter circa 1924

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History of Amateur Radio...

They must also be built from mechanically well engineered and constructed parts. A flimsy variable capacitor would easily lose calibration. The quality of the tuning components was far more important than the indicator.

The best standard for calibration was the Bureau of Standards station WWV since other stations' wavelengths were not particularly accurate. You could also set a wavemeter to another known calibrated wavemeter or send it to a lab for calibration. Calibration of a standard, commercially available numerical scale (tuning dial) could be done by plotting its settings on a graph.



Example wavemeter circuit

Even with a calibrated wavemeter, using one to calibrate your equipment was a complicated process in 1924. When using the wavemeter with a transmitter, the coupling needed to be very loose or you'd risk burning out the indicator if it was a bulb. To use a wavemeter with a receiver, you would first set the receiver's detector into oscillation. Next, with the wavemeter coil very close to the detector's secondary circuit, you'd tune it until you heard a click in the receiver, indicating that the instrument was loading the receiver's detector circuit and stopping its oscillations. Then, you would continue to tune in the same direction until you heard a second click, indicating you'd gone beyond the point where it again oscillated. Now you'd back off the distance to the wavemeter in steps until the two points converged; that would be the measurement point. The click method would work when receiving a signal too.

Kruse warned, however, against calibrating your receiver's tuner since the markings will not have any meaning unless all the various settings were re-set exactly the same way each time, which, he matter-of-factly stated was impractical in most tuners and therefore "it is 'the bunk' to calibrate a tuner—keep a wavemeter handy instead." With a calibrated receiver dial still a distant dream, Kruse's advice was: don't even try it!

He then presented circuits for use in receiving shortwaves and variations on the Hartley and Colpitts oscillators for transmitting, designs that would be in use for decades to come. Since it was important to control stray capacitances and resistances, Kruse recommended that, "sockets and tube bases should be removed—they have no business in a 20 meter set." Tubes should be wired in without sockets!

Two years earlier, Kruse and Mason, QST's Department Editor, had announced the formation of the ARRL Radio Information Service. Its purpose was to answer questions, mostly of a technical nature, submitted by League members. The service was needed, they wrote, because waiting for the next QST took too long and "the average amateur does not want to wait long for his information. He would rather 'try it and see if anything blows up.'" The smoke test has a long tradition.

Thus, the service endeavored to answer technical questions directly by exchanging letters with members, although the editors admitted that this "takes up most of the time of four people." They asked members to help them by sending in new information of all sorts as they found it; in this way the service could act as a central repository. To prime the readership, they presented a list of information actively being sought, including experiences with Beverage wires and counterpoises, antenna insulators, "transmission as affected by the moon and the barometer," tube comparisons, and information about "dead spots' you know of," meaning skip zones.

The service's rules were simple: check your back issues of QST before asking something that has already been covered there; supply a diagram and other full information so that a complete answer could be given; and since "all radio men write a terrible 'paw', use a typewriter."

With the accelerating pace of changes and the announcement of new bands, the frontier where no ham had gone before, the Information Service was beginning to feel overwhelmed. The League reiterated its rules and added a final item: "Please remember, Rome was not built in a day."

The National Radio Conference had gone on record favoring the elimination of spark radio and the Commerce Department was expected to follow suit. The department would not recall licenses since the 1912 law, which was still in effect, allowed the possession of spark equipment and because it seemed unnecessary since fewer than one percent of ARRL members were still using spark. Warner did not believe that even a hundred of them were left.

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Please Support Our EGARA Hamfest Sponsors!



History of Amateur Radio...

The department asked for ARRL cooperation, prompting this response:

"The A.R.R.L. here and now calls for the complete and immediate abolition of the amateur spark. Its day is done: let it begone. This is a civilized age and we have no place for decrement today. The editors of QST have owned and operated sparks that were their joy and pride, sparks as good as most of them, and nobody knows better than we the romance and fascination of the old rotary. But its name is Mud today and out it must go, 100%."

With that announcement spark would shortly disappear from the air forever.

On 6 October 1924, eighty representatives from every radio service and region of the country gathered for five days to attend Secretary Hoover's third National Radio Conference. The conference recommended allocations that were nearly the same as those announced by the department in July and had been in use ever since. Its conclusions were termed "advisory" and would not become official until the Department of Commerce adopted them, which was expected to happen soon. As Warner wrote, "All the wavelengths from 0 to 3158 meters" were allocated for one year, anticipating annual conferences for continual review.

Broadcasting was again the conference's main concern. In addition to the previous vacating of 450 meters by marine users, 300 meters was freed up resulting in a continuous broadcasting band from 200 to 545 meters, adding thirty new channels. A committee was already in the process of assigning specific wavelengths to broadcast stations. It would proceed according to classes: Class 1, the best stations, 545 to 280 meters, Class 2, 275 to 214, Class 3, 211 to 205. Five channels were set aside specifically for small stations transmitting less than 100 watts. The displaced distress and marine users got five wavelengths above 600 meters along with the 1579- to 2500-meter band.

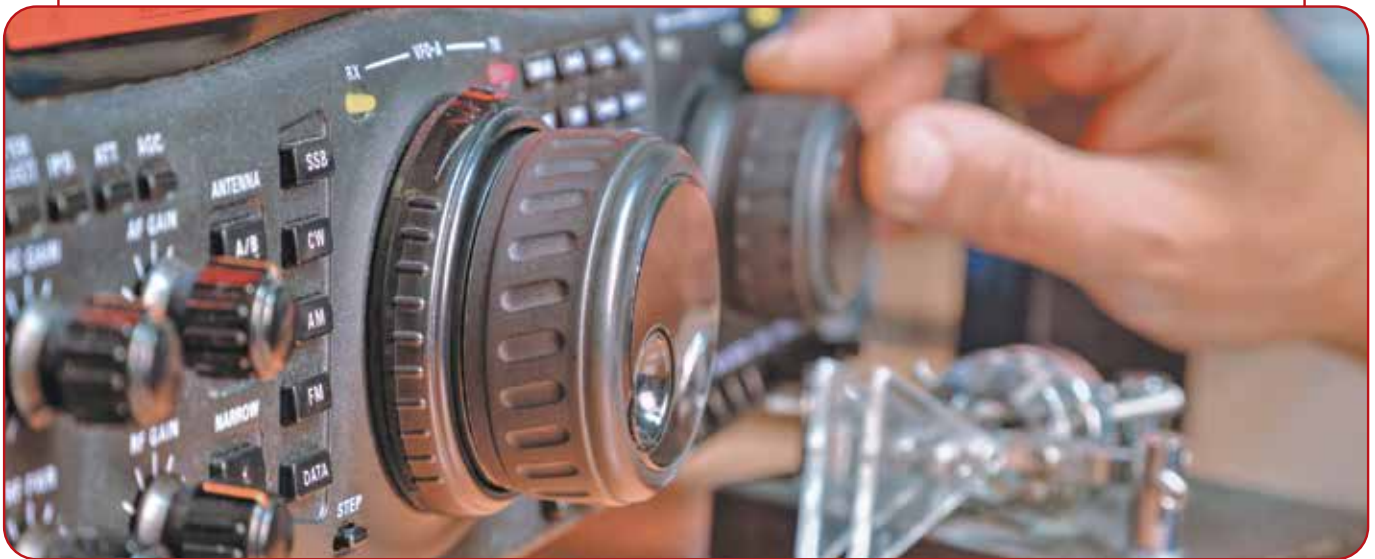
And in support of broadcasting networks yet to come, "It was believed that nationwide broadcasting by interconnection of stations deserved every encouragement and stimulation and to that end the Conference recommended the appointment of a continuing committee to work out necessary plans for its accomplishment."

The amateur allocations were later changed slightly to make them harmonically related. This was done to avoid interference that might result from the generation of harmonics from an amateur band falling onto wavelengths assigned to other services. The same scheme was applied to the other services, too.

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Wavelength (meters)	Allocation
0 – 4.7	Beam transmission
4.7 – 5.3	Amateur
5.3 – 16.7	Beam transmission
16.7 – 18.7	Public service and mobile
18.7 – 21.2	Amateur
21.2 – 25.8	Public service
25.8 – 27.3	Relay broadcasting, exclusive
27.3 – 30.0	Public service
30.0 – 33.3	Relay broadcasting, exclusive
33.3 – 37.5	Public service and mobile
37.5 – 42.8	Amateur, and army mobile
42.8 – 51.7	Public service
51.7 – 54.5	Relay broadcasting, exclusive
54.5 – 60.0	Public service
60.0 – 66.7	Relay broadcasting, exclusive
66.7 – 75.0	Public service and mobile
75.0 – 85.6	Amateur, and army mobile
85.6 – 103.3	Public service
103.3 – 109.2	Relay broadcasting, exclusive
109.2 – 120	Mobile
120 – 137	Aircraft, exclusive
137 – 150	Point-to-point non-exclusive
150 – 200	Amateur
200 – 545	Phone broadcasting, exclusive

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History of Amateur Radio...

This emphasis on managing harmonics was proposed by Dr. A. N. Goldsmith of the allocations committee, where the motto was “Everybody must eat his own mush.”

Maxim officially represented amateur radio on the important allocations committee, with ARRL secretary Kenneth Warner as alternate, and Vice President Charles Stewart as an additional advisor. Besides Maxim, the amateur sub-committee included Stewart, Warner, Professor C. M. Jansky of the University of Minnesota, Edwin Armstrong, and several other notable hams with professional ties to commercial radio. This committee recommended allowing the use of all amateur allocations under a single license, implicitly doing away with special licenses. To partly address interference concerns, they recommended that phone and ICW14 be allowed only on 170–180 meters, and that there be no provision for spark anywhere. They further recommended that loose transmitter coupling to the antenna be required to minimize harmonic generation, and that using receivers capable of also emitting signals should be discouraged. And as a matter of operating procedure, they endorsed the “confirmation” of the League’s system of intermediates for international identification.

Equally important as their direct participation on the allocations committee, the hams also had a friend in Secretary Hoover who specifically instructed the committee to take “adequate care of the amateurs.” Allocations were thus made in “an atmosphere in which the undoubted disapproval of certain commercial interests was necessarily subdued,” observed Warner. Hoover was so overtly appreciative of all that amateur radio had done and placed such emphasis on preserving it that “one might almost suppose that during his leisure moments he was a radio amateur himself,” wrote Electrical Engineering Professor A. E. Kennelley of Harvard.

Kennelley highlighted two interesting characteristics of the new allocations: One was that the ratio of highest to lowest frequency in each band was 1.143, with the exception of the 150-200 meter band. Secondly, as Goldsmith had remarked at the conference, all the other new bands were even harmonics of that lowest frequency band. The same scheme applied to all radio services to ensure that harmonics always occurred within the bands of the same service that produced them. Kennelley’s more prosaic and wordy version of Goldsmith’s “mush” remark was, “As one member of the conference expressed the matter colloquially, each service should be charged with the duty of consuming its own harmonic excrescences.”

He then reiterated the common understanding that waves of shorter length were more readily absorbed by land and sea than longer ones, proven by experiment. Long waves, therefore, should always have an advantage in long distance communications. Still, he admitted, it was a fact that 100-meter waves cross the oceans at night with very little power and no satisfactory explanation had yet been proven. He speculated that the answer might lie in the existence of an upper atmospheric conductive layer, as first suggested by scientists in 1902. If the transition from non-conducting to conducting was sharp enough, the absorption might be minimal, and perhaps favor the shorter waves. “This is only one of the many and debatable questions which today cannot be answered, but which the work of amateurs may be able to find an answer for in the future,” predicted Kennelley.

After the conference, a new bill was proposed directly by Secretary Hoover, again emphasizing broadcasting. In a letter addressed to Congressman White, Hoover said he believed that comprehensive legislation would ultimately be required but could not be rushed. Determining its shape would take time, probably another year. Meanwhile, he proposed a “short bill” to help manage things in the interim. This also would have the effect of sidelining the existing White bill.

Significantly, he envisioned that broadcasting might be considered a public service instead of, or in addition to, a commercial business. If so, whatever legislation emerged would be fundamentally different from previous laws.

(continued on page 15)

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History of Amateur Radio...

Setting this tone of public ownership, he wrote that, “the ether within the limits of the United States its territories and possessions is the inalienable possession of the people thereof, and that the authority to regulate its use in interstate and/or foreign commerce is conferred upon the Congress of the United States by the Federal Constitution.”

The proposed legislation would also modify the 1912 law to give the Secretary of Commerce the responsibility and power to regulate, at his “discretion,” the operation by licensees, including wavelengths, emission characteristics, and equipment—just as was provided in the White bill. Naturally, it therefore raised the same warning flags as before, both at the League and at the National Association of Broadcasters.

New regulations were put into effect starting on 25 January 1925 as a result of the convention. They included minor changes to the boundaries of the five amateur bands: 150 to 200 meters, 75 to 85.7 meters, 37.5 to 42.8 meters, 18.7 to 21.4 meters, and 4.69 to 5.35 meters. (Frequency specifications were on the way but hadn’t yet been widely adopted.) Spark should be abandoned “as soon as possible” but continued to be permitted in the 170 to 180 meter segment along with ICW. Strict requirements on equipment design included loose coupling to the antenna to reduce harmonics and other spurious effects, but there were still no requirements on power supplies—only that the emitted wave should be “sharply defined.” Quiet hours would only be observed above 150 meters wavelength as before. And all licensees would be granted access to all of the bands. Thus there was no further need for special licenses, and no new ones would be issued. Recognizing how strongly hams identities were tied to their call signs, current holders of the special “Z” calls would be allowed to keep them.

A few months later the commerce department announced a sixth new band of “ultra short waves” at $\frac{3}{4}$ meters for amateur reflection development or beam transmission, both terms referring to directional radiation patterns. The band would be from 400 to 401 MHz. “Now we’re all set to try beam transmission at a frequency where the physical dimensions of the reflector apparatus will fit the average amateur’s static-room,” commented Warner. While the band would not see much actual use for more than a decade, the early willingness of Commerce to provide amateurs with yet another band indicated the value they placed on the exploratory work hams had been doing.

Band allocations, signal standards, regulatory authority—it was all there, to form a framework for the future evolution of radio for decades to come. But not before a major flaw in its foundation would threaten to bring it all crashing down.



A Real Amateur Wavemeter, Range 140-230 Meters, One Meter Division Scale. Also Reads in Kilocycles.

AT the request of a number of prominent amateurs, we have developed a special amateur range wavemeter, which is equipped with a special condenser arrangement whereby the scale is broadened, enabling accurate readings to be made with considerable ease. The one meter divisions are approximately one millimeter wide.

D. C. Wallace of 9ZT-9XAX winner of the 1923 Hoover Cup, made a test of this wavemeter against the most elaborate standards available, showing the instrument to be far more accurate than would be expected from its low price. The experiences and statements of other prominent amateurs show this special amateur wavemeter to be quite accurate and so built that the accuracy will be retained.

Jewell Pattern No. 90 amateur range wavemeter, price \$25.00. Range, 140-230 meters.

BROADCAST RANGE

TO cover the broadcast range, there is a wavemeter similar to the above with a range of 150-625 meters, as well as a special type equipped with a self-contained buzzer and dry cell for checking receiving sets and having a range of 200-625 meters.

The instrument for checking transmitting sets is priced at \$20.00 and the wavemeter complete with buzzer and dry cell at \$30.00.

JEWELL ELECTRICAL INSTRUMENT CO.
1640 WALNUT STREET CHICAGO

Manufacturers of the Jewell complete line of miniature switchboard instruments, Jewell radio test set wavemeters, etc.

CALENDAR

September 14 10, 2022 - 7 pm - Monthly club meeting - in person at Masonic Lodge.

September 17, 2022 - 11 am - 3 pm - East Greenbush Community Day, Town Park, EGARA Exhibit of Amateur Radio

September 24, 2022 - Masons on the Air

December 14, 2021 - 7 pm - Annual Christmas Holiday Party, location TBD

Pro Tip: Reporting Bad Hams

Have you heard someone willfully interfering with Amateur Radio operations? You can report the offender to the FCC.



Amateur Radio complaints should be as specific as possible, citing dates, times, and frequencies on which alleged violations occurred. Complaints should also include a name and telephone number where the person making the complaint can be reached for further details, if necessary.

Submit your complaints or concerns using the FCC's on-line complaint system. The form for filing complaints can be found at:

<https://consumercomplaints.fcc.gov>
(click on the radio icon)

Regulations Covering Willful or Malicious Interference Complaints

Section 97.101(d) of the FCC's Rules prohibits Amateur operators from willfully or maliciously interfering with or causing interference to any radio communication or signal. 47 C.F.R. § 97.101(d).

The Spectrum Enforcement Division, in conjunction with the Regional and Field Offices, is responsible for responding to complaints of willful and/or malicious interference among amateur radio service licensees.



For Sale...

- **Handheld speaker mic** 3.5 mm with PU wire for Yaesu, baofeng two-way radio asking \$ 12.00
- **MFJ-1982** mp end fed di pole 80-10 1/2 wave 300 watts \$50.00.
- **LDG autotuner YT-1200** works with ft 450 ft 450d ft 950 ft 991 ft 991 a ftdx 1200 & ftdx 3000 \$ 75.00
- **HG scanner antenna** \$30.00

Contact Walt at: n2wjr07@gmail.com

- **VIBROPLEX "Bug" semi-automatic key.** Original "PRESENTATION" Model with Gold Plated baseplate escutcheon. Beautiful heavily chromed upper parts, bright red finger pieces, jeweled bearings. Lists for \$350 but you can own this beauty for only \$250 plus postage. In absolutely beautiful condition, this dazzling example of Vibroplex engineering will be supplied in a unique hard-shell protective carrying case.

Contact Steve at: (518) 326-0902 or
stevewb2hpr@gmail.com

- **Kenwood 520 Transceiver**, \$250
- **ICOM 756** with 6 meters, screen has line in it, but radio operations are unaffected, \$300
- **Heathkit DX 35 AM Transmitter with VFO**, \$150
- **Kenwood 2 Meter radio**, no tone board, \$15
- **Alinco 220 meter radio**, \$125.

Contact Tom at kc2fcp@nycap.rr.com

- **Broadcast Electronics - BE 250 - 5 Channel Broadcast Audio Console** - 5 mono channels with program and audition channels, 1 mike input, 4 line inputs, plus switchable multi-inputs. Originally used at Voice of America. With install/operation manual. \$150.

Contact Bryan at W2RBJ@outlook.com

Got stuff to sell, swap, or looking to buy?

List it here for FREE!

Email W2RBJ@outlook.com

The East Greenbush Amateur Radio Association

Organized in 1998, by Bert Bruins, N2FPJ, (SK) and Chris Linck, N2NEH, the East Greenbush Amateur Radio Association, an ARRL affiliate, is committed to providing emergency services, educational programs, and operating resources to amateur radio operators and residents of the Capital Region of New York State. The club station is W2EGB. The club also has several VHF and UHF repeaters open to club members and the public.